

## Notes from Dr Geoff Clover's talk 17 June 2009 – HIV/AIDS opportunistic infections and drug treatment.

- Candidiasis oesophageal – is a sign of AIDS.
- Tuberculosis - Anyone who presents with a TB infection should initiate a health professional to check for HIV - in AIDS there may be infection in other areas apart from the lungs. Often lung xrays appear normal.
- *Pneumocystis Jirovecki* pneumonia PCP (or PJP) is almost exclusively found when a person has a CD4 cell count under 200. Prophylaxis is very important in people with cell counts <200. Treated by Cotrimoxazole – this drug can cause fever and a rash, headaches. A good test for PCP is walking someone up the stairs and their O2 saturation will drop. There is no effective treatment for JC polyoma virus. 50% response rate only.
- Kaposi's sarcoma is normally only seen outside Mediterranean is due to AIDS. Some advanced cases do not respond to treatment.
- Cervical dysplasia/cancer - 6/12 screening for cervical dysplasia/cancer is necessary in patients with HIV/AIDS. Cancers are more of an issue as fewer people dying of Toxoplasmosis.
- Hepatitis B & C is common if HIV infection is due to injecting. If a person has Hepatitis the prognosis is not as good as they progress to cirrhosis more quickly.
- HIV alters diagnosis of STIs as they present differently.

The main thing is to treat persons who are infected with the virus for opportunistic infections. And an anomaly can occur called:

**Immune reconstitution syndrome (IRIS)** – it is common as a person is getting better from the virus as once their CD4 counts goes up, they may feel worse as their immune system starts to respond to any infections.

### Drug treatment

Four different types of drugs are used in the treatment of HIV:

- Two drugs target **reverse transcriptase inhibitors**.
- Three others target other areas - **protease inhibitors, fusion inhibitors and integration inhibitors**.
- AZT one of the first drugs ever used is now used in combination with others.

Drug resistance is common due to the ability of the HIV virus to mutate a billion times over. Non-compliance increases the risk of resistance. The most important aspect of care is to ensure that the patient takes their medication. Now drugs are given once per day, there is a low pill burden and the new drugs minimise food restrictions.

The number of daily pills has reduced from 20 to 3 in NZ ( 2 in the USA). People with a CD4 300-350 and definitely at 200 require drug treatment. All pregnant women must be treated regardless of their CD count. One drug called Efavirenz has low side effects but people can get nightmares.

### Side effects

Rashes and reduced kidney function are the main areas where side effects occur. An emerging issue caused by the new drugs and the fact that people are living longer is Cardiovascular disease. Also osteoporosis may be linked to drug use.

Long term side effects are not always known and new drugs are released on the market sooner than other drugs due to the urgent need to treat the HIV virus. For example, increased Myocardial infarction is occurring.

**Future treatment**

HIV eradication is not possible at the moment as it integrates with the genetic structure. The aim is to suppress the virus – it cannot be cured. HIV/AIDS needs ongoing monitoring and treatment. People with no detectable virus can still transmit the disease.